ACC.14
TCT@ACC-i2 | innovation in intervention

A431
JACC April 1, 2014
Volume 63, Issue 12

Arrhythmias and Clinical EP

INCIDENCE OF POSTOPERATIVE ATRIAL FIBRILLATION (POAF) AFTER ROBOTIC CABG VERSUS TRADITIONAL CABG AND ITS ASSOCIATED MORTALITY AND MORBIDITY

Poster Contributions
Hall C
Sunday, March 30, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Arrhythmias and Clinical EP: New Observations Affecting Clinical Management
Abstract Category: 4. Arrhythmias and Clinical EP: AF/SVT
Presentation Number: 1217-118

Authors: *Muhammad Rizwan Sardar, Wajeeha Saeed, MaryAnn Wertan, Marwan Badri, Trisha Senss, Francis Sutter, Lankenau Medical Center, Wynnewood, PA, USA*

Background: Postoperative Atrial Fibrillation (POAF) is a common complication following cardiac surgeries. Minimally invasive revascularization; like Robotic CABG (R-CABG) have shown comparable efficacy and shorter length of stay as compared to traditional sternotomy CABG. However, there is no data comparing two forms of revascularization and their associated POAF.

Methods: This is a retrospective, single center study that included all R-CABG and CABG performed at our institution from 2003-2012. Primary outcome of the study is incidence of POAF. Secondary outcomes are thirty day mortality and length of stay (LOS).

Results: There were 1324 patients in CABG and 991 in R-CABG group. CABG group had higher mean age (66.2 vs 65.2), more males (75.7% vs 70.1%), more no. of diseases vessels (2.83 vs 2.17) with higher graft anastomosis (3.44 vs 1.31) compared with R-CABG arm. There was higher incidence of POAF in CABG arm (26.5%) vs R-CABG (15.2%) p <0.001; OR 2.067 [1.66-2.56]. After adjusting for confounders, p 0.018; 1.93 [1.12-3.34]. There was shorter LOS 5.96 vs 7.95 days (p<0.001) and higher 30 day survival 97.3% vs 89.1%(p <0.001) in R-CABG group. However, survival analysis is limited due to higher unavailable data for CABG arm (9.8%).

Conclusion: Incidence of POAF is higher in traditional CABG as compared to R- CABG. The incidence is independently predicted by the choice of revascularization technique and is associated with higher morbidity. Choice of surgery may play a role in reducing morbidity due to POAF.

Variables	CABG (1324)	R-CABG (991)	P value
POAF 9%)	351 (26.5%)	151(15.2%)	<0.001*
30 day status Dead Alive Unknown	 14 (1.1%) 1179 (89.1%) 130 (9.8%)	 9 (0.9%) 964 (97.3%) 18 (1.8%)	<0.001*
Mean & median post op LOS (days)	7.95 & 6	5.96 & 4	<0.001*
Left main disease 9%)	471 (35.6%)	139 (14%)	<0.001*
Mean no. of disease vessels	2.83	2.17	<0.001*
Mean no. of distal anastomosis	3.44	1.31	<0.001*
Intra-op bleeds requiring transfusion (%)	318 (24%)	66 (6.7%)	<0.001*
COPD (%)	176 (13.3%)	158 (16%)	0.63
CHF (EF<40%) Mean EF	16.6% 48±13.6	11.7% 52±12.3	0.001*
Age (years)	66.2±9.98	65.6±11.2	0.023*
Males (%)	1002 (75.7%)	695(70.1%)	0.003*
DM (%)	41.4%	38%	0.108
HTN (%)	86.5%	83.2%	0.031*
Permanent CVA (%)	1.2%	0.6%	0.23
Extubated in OR (%)	78.4%	88.5%	<0.001*
Reintubated (%)	5.3%	3.8%	0.10
Ventilator > 24 hr (%)	16%	11.4%	0.107
BMI	29.08±5.71	29.48±5.83	0.103
Post op Renal failure (%)	5.6%	4.5%	0.327